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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,016	08/16/2006	Peter J. Schmidt	DE040060	9272
24737 7590 02/26/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
KOSLOW, CAROL M				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
02/26/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/598,016

Applicant(s)

SCHMIDT ET AL.

Examiner

C. Melissa Koslow

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 7 and 12-15 is/are allowed.
- 6) ☒ Claim(s) 4-6 and 8-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 8/16/06 4/25/07
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

U.S. patent 5,998,925 is cited in both Information Disclosure Statements. The later filed duplicate citation has a line drawn through it.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference numbers 3, 4 and 5 in figure 1.

The drawings are objected to because the different lines in figure 8 are not clearly identified. The lines all look identical. In addition, figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The disclosure is objected to because of the following informalities:

In all occurrences of the green barium silicate phosphor, the formula should be rewritten as $(\text{Ba}_{1-x}\text{Sr}_x)_2\text{SiO}_4$. For the blue phosphor formulas, applicants need to clarify, either in the response or in the specification, if both Cl and Br must be present or if only one need be present and if Sr, Ba and Ca must be present or if only one need be present. In the phosphor art, both interpretations are commonly used and accepted. On page 9, line 14, "cer" should be "Ce". There is a question if the molar ratio on page 11 is correct. Since the formula teaches Ce replaces part of Y, one of ordinary skill in the art would expect $\text{Y}_2\text{Si}_4\text{N}_6\text{C}:5\%$ Ce to be equivalent to $\text{Y}_{0.95}\text{Si}_4\text{N}_6\text{C}:\text{Ce}_{0.05}$. Accordingly, the molar amount of Y would be expected to be 1.95, not 2 as disclosed. Appropriate correction is required.

Claims 6 and 11 are objected to because of the following informalities: For the green barium silicate phosphor, the formula should be rewritten as $(\text{Ba}_{1-x}\text{Sr}_x)_2\text{SiO}_4$. Appropriate correction is required.

Claims 4-6 and 8-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Pages 15-18 teach a white illumination system comprising an LED which emits in the range of 400-480 nm, the claimed carbo-nitridosilicate phosphor and at least one of a red and green phosphor. Claim 4 is directed to an illumination system, where the color emitted is not defined, comprising an LED which emits in the range of 400-480 nm, the claimed carbo-nitridosilicate phosphor and any second phosphor. Claims 5 and 6 are directed to an illumination

system, where the color emitted is not defined, comprising an LED which emits in the range of 400-480 nm, the claimed carbo-nitridosilicate phosphor and a red or green phosphor. Thus what is claimed and what is disclosed in the specification are different. This discrepancy needs to be corrected.

Pages 5, 18 and 19 teach a white illumination system comprising an LED which emits in the range of 200-420 nm, the claimed carbo-nitridosilicate phosphor and a blue phosphor or a mixture of blue, green and red phosphors. Claim 8 is directed to an illumination system, where the color emitted is not defined, comprising an LED which emits in the range of 200-420 nm, the claimed carbo-nitridosilicate phosphor and any second phosphor. Claims 9-11 are directed to an illumination system, where the color emitted is not defined, comprising an LED which emits in the range of 200-420 nm, the claimed carbo-nitridosilicate phosphor and a blue, red or green. Thus what is claimed and what is disclosed in the specification are different. This discrepancy needs to be corrected.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This claim is indefinite since it is unclear if both Cl and Br must be present or if only one need be present and if Sr, Ba and Ca must be present or if only one need be present. In the phosphor art, both interpretations are commonly used and accepted.

Claims 1-3, 7 and 12-15 are allowable over the cited prior art of record.

The claimed phosphor is not taught or suggested by the cited prior art.

U.S. patents 7,262,439 and 7,442,326 are cited as of interest since they claim illumination systems comprising the carbo-nitridosilicate phosphor claimed in this application; a radiation source such as an UV to blue LED and a second phosphor. Both of these patents have a filing date after the effective filing date of this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorenzo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/cmk/
February 26, 2009

/C. Melissa Koslow/
Primary Examiner
Art Unit 1793